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# **California Board of Registered Nursing**

## **2009-2010 Annual School Report**

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Data Summary and Historical Trend Analysis

A Presentation of Pre-Licensure Nursing Education Programs in California

**Southern California II**  
Orange, Riverside and San Bernardino Counties

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## INTRODUCTION

Each year, the California Board of Registered Nursing (BRN) requires all pre-licensure registered nursing programs in California to complete a survey detailing statistics of their programs, students and faculty. The survey collects data from August 1 through July 31. Information gathered from these surveys is compiled into a database and used to analyze trends in nursing education.

The BRN commissioned the University of California, San Francisco (UCSF) to conduct a historical analysis of data collected from the 2000-2001 survey through the 2009-2010 survey. In this report, we present ten years of historical data from the BRN Annual School Survey. Data analyses were conducted statewide and for nine economic regions<sup>1</sup> in California, with a separate report for each region. All reports are available on the BRN website (<http://www.rn.ca.gov/>).

This report presents data from the 3-county Southern California II region. Counties in the region include Orange, Riverside and San Bernardino. All data are presented in aggregate form and describe overall trends in the areas and over the times specified and, therefore, may not be applicable to individual nursing education programs. Additional data from the past ten years of the BRN Annual School Survey are available in an interactive database on the BRN website.

Data collected for the first time from the 2009-2010 survey are identified by the symbol (§). The reliability of these new data will be reviewed and considered for continued inclusion in future surveys.

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<sup>1</sup> The nine regions include: (1) Northern California, (2) Northern Sacramento Valley, (3) Greater Sacramento, (4) Bay Area, (5) San Joaquin Valley, (7) Central Coast, (8) Southern California I (Los Angeles and Ventura counties), (9) Southern California II (Orange, Riverside, and San Bernardino counties), and (10) Southern Border Region. Counties within each region are detailed in the corresponding regional report. The Central Sierra (Region 6) does not have any nursing education programs and was, therefore, not included in the analyses.

## DATA SUMMARY AND HISTORICAL TREND ANALYSES

This analysis presents pre-licensure program data from the 2009-2010 BRN School Survey in comparison with data from previous years of the survey. Data items addressed include the number of nursing programs, enrollments, completions, retention rates, student and faculty census data, the use of clinical simulation by nursing programs, and clinical space and practice restrictions.

### Trends in Pre-Licensure Nursing Programs

#### *Number of Nursing Programs*

In 2009-2010, there were 25 nursing programs<sup>2</sup> in the Southern California II Region that led to RN licensure. Of these programs, 14 are ADN programs, nine are BSN programs, and two are ELM programs. The number of nursing programs in the region has doubled over the past decade. Most of this program expansion occurred between 2005-2006 and 2008-2009, and the majority of new programs that opened during this period are at private schools. Still, public programs in the region outnumber private programs.

#### **Number of Nursing Programs**

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
<b>Total # Nursing Programs</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>17</b>	<b>19</b>	<b>24</b>	<b>25</b>
ADN Programs	10	10	10	10	11	11	11	12	14	14
BSN Programs	2	2	2	2	2	3	5	5	8	9
ELM Programs							1	2	2	2
Public Programs	11	11	11	11	12	12	15	15	15	15
Private Programs	1	1	1	1	1	2	2	4	9	10

#### *Admission Spaces and New Student Enrollments*

Admission spaces available for new student enrollments have more than tripled (n=2,012) in the past ten years, from 972 spaces in 2000-2001 to 2,984 in 2009-2010. Growth in admission space has been especially strong in the past two years. From 2007-2008 to 2009-2010, enrollments increased 51.2% (n=977). However, in 2009-2010, the 2,984 spaces were filled by a total of 2,884 students, and for the first time in since the 2004-2005 academic year, new enrollments represented less than 100% of available space among the region's programs.

<sup>2</sup> In 2009-2010, a program that had been accounted for in the Southern California I region was incorporated into the data and reporting for this region (Southern California II) instead. Therefore, the increase in the number of programs between 2008-2009 and 2009-2010 is due to this change.

**Availability and Utilization of Admission Spaces**

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Spaces Available	972	1,079	1,117	1,127	1,192	1,438	1,643	1,734	2,361	2,984
New Student Enrollments	943	1,047	1,117	1,153	1,189	1,519	1,946	1,907	2,496	2,884
% Spaces Filled	97.0%	97.0%	100.0%	102.3%	99.7%	105.6%	118.4%	110.0%	105.7%	96.7%

The number of qualified applications to Southern California II region's pre-licensure nursing programs continued to grow in 2009-2010, increasing by 37.3% (n=2,243) over the previous year. Despite the increase in admission spaces available for new students in 2009-2010, however, nursing programs in the region accepted a smaller share of qualified applications (34.9%) compared with 2008-2009 (41.5%).

**Applications Accepted and Not Accepted for Admission\***

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
<b>Qualified Applications</b>	<b>1,630</b>	<b>1,734</b>	<b>1,944</b>	<b>3,226</b>	<b>3,245</b>	<b>3,818</b>	<b>3,310</b>	<b>5,412</b>	<b>6,013</b>	<b>8,256</b>
<i>Accepted</i>	943	1,047	1,117	1,153	1,189	1,519	1,946	1,907	2,496	2,884
<i>Not Accepted</i>	687	687	827	2,073	2,056	2,299	1,364	3,505	3,517	5,372
% Qualified Applications Not Accepted	42.1%	39.6%	42.5%	64.3%	63.4%	60.2%	41.2%	64.8%	58.5%	65.1%

\*Since these data represent applications rather than individuals, an increase in qualified applications may not represent equal growth in the number of individuals applying to nursing school.

In 2009-2010, new student enrollments in the region's pre-licensure nursing education programs increased overall. However, this enrollment growth was due to increases in BSN programs, in which enrollments nearly doubled (85.7%, n=556) compared with the previous year. In contrast, new enrollments in both ADN and ELM programs declined. The dramatic increase in BSN enrollments may be explained by programs that were new in the 2008-2009 academic year, the 2009-2010 change that incorporated data from an existing BSN program into this region, and the overall expansion of these programs since they began enrolling students. This rationale also explains the substantial growth in new student enrollments among private programs in the region. Since 2007-2008, enrollments in private programs have more than quadrupled, from 316 in 2007-2008 to 1,364 in 2009-2010. Private programs now account for 47.3% of new student enrollments in the region.

**New Student Enrollment by Program Type**

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
<b>New Student Enrollment</b>	<b>943</b>	<b>1,047</b>	<b>1,117</b>	<b>1,153</b>	<b>1,189</b>	<b>1,519</b>	<b>1,946</b>	<b>1,907</b>	<b>2,496</b>	<b>2,884</b>
ADN	729	842	905	935	966	1,216	1,473	1,442	1,773	1,633
BSN	214	205	212	218	223	303	473	394	649	1,205
ELM							0	71	74	46
Private						182	242	316	934	1,364
Public	828	930	991	1,027	1,054	1,337	1,704	1,591	1,562	1,520

### Student Completions

The number of students who completed a nursing program in the Southern California II region has nearly tripled over the past decade, from 738 in 2000-2001 to 2,011 in 2009-2010. Of the total number of students that completed a nursing program in 2009-2010, 79.0% (n=1,588) of them completed an ADN program, 19.9% (n=401) completed a BSN program, and 1.1% (n=22) completed an ELM program. This distribution will shift toward BSN program completions in the coming years as a result of increasing BSN program enrollments.

#### Student Completions

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
<b>Student Completions</b>	<b>738</b>	<b>767</b>	<b>751</b>	<b>956</b>	<b>999</b>	<b>1,002</b>	<b>1,137</b>	<b>1,300</b>	<b>1,582</b>	<b>2,011</b>
ADN	619	638	620	786	862	845	950	1,057	1,220	1,588
BSN	119	129	131	170	137	157	187	243	308	401
ELM							0	0	54	22

### Retention Rate

Of the 1,833 students scheduled to complete a nursing program in the 2009-2010 academic year, 75.4% (n=1,382) completed the program on-time, 14.1% (n=259) are still enrolled in the program, and 10.5% (n=192) dropped out or were disqualified from the program. The attrition rate has steadily improved since 2004-2005 (when it was 20.1%), and the 10.5% in 2009-2010 represents a ten-year low.

#### Student Cohort Completion and Retention Data

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
<b>Students Scheduled to Complete the Program</b>	<b>1,099</b>	<b>1,211</b>	<b>1,076</b>	<b>1,353</b>	<b>1,272</b>	<b>1,112</b>	<b>1,121</b>	<b>1,271</b>	<b>1,637</b>	<b>1,833</b>
Completed On Time	699	745	667	970	886	792	805	924	1,138	1,382
Still Enrolled	179	279	198	170	130	116	129	160	256	259
Attrition	221	187	211	213	256	204	187	187	243	192
Completed Late <sup>‡</sup>										173
<b>Retention Rate*</b>	63.6%	61.5%	62.0%	71.7%	69.7%	71.2%	71.8%	72.7%	69.5%	75.4%
<b>Attrition Rate</b>	20.1%	15.4%	19.6%	15.7%	20.1%	18.3%	16.7%	14.7%	14.8%	10.5%
<b>% Still Enrolled</b>	16.3%	23.1%	18.4%	12.6%	10.2%	10.4%	11.5%	12.6%	15.6%	14.1%

\*Retention rate = (students who completed the program on-time) / (students scheduled to complete the program)

<sup>‡</sup> Data were collected for the first time in the 2009-2010 survey. These completions are not included in the calculation of either the retention or attrition rates.

Although BSN programs have historically had lower attrition rates than ADN programs, 2009-2010 data show that the average attrition rate for BSN programs in the region (10.2%) was nearly identical to the rate for ADN programs (10.3%). The ELM programs had a much higher attrition rate (19.1%) by comparison. Since 2004-2005, the average attrition rate for ADN programs has improved, while the rate for BSN programs has fluctuated. Attrition rates for both the private and public programs dropped substantially in 2009-2010 compared with the previous year, and were the lowest they've been in the past ten years.

### Attrition Rates by Program Type

Program Type	Academic Year									
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
ADN	21.4%	14.9%	20.4%	16.7%	21.2%	19.5%	17.7%	15.7%	14.8%	10.3%
BSN	12.3%	18.8%	14.9%	9.9%	12.7%	12.6%	11.0%	9.9%	16.6%	10.2%
ELM									8.1%	19.1%
Private						19.6%	19.0%	17.5%	14.3%	8.3%
Public	20.8%	14.5%	20.1%	16.5%	20.4%	18.2%	16.5%	14.5%	15.0%	11.4%

There has been fluctuation in the retention and attrition rates over the ten-year period documented in the above tables. There were changes to the survey between 2003-2004 and 2004-2005, and between 2004-2005 and 2005-2006 that may have affected the comparability of these data over time.

### Student Census Data

The total number of students enrolled in nursing programs in the Southern California II region has more than doubled over the past decade, from 1,846 on October 15, 2001 to 4,780 on October 15, 2009.

### Student Census Data\*

Program Type	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ADN Program	1,467	1,648	1,553	1,784	1,927	2,109	2,336	2,471	2,834	2,809
BSN Program	379	511	599	636	656	759	964	1,104	1,702	1,847
ELM Program							63	125	151	124
<b>Total Nursing Students</b>	<b>1,846</b>	<b>2,159</b>	<b>2,152</b>	<b>2,420</b>	<b>2,583</b>	<b>2,868</b>	<b>3,363</b>	<b>3,700</b>	<b>4,687</b>	<b>4,780</b>

\*Census data represent the number of students on October 15<sup>th</sup> of the given year. Blank cells indicated that the applicable information was not requested in the given year.

### *Clinical Simulation in Nursing Education*

Data indicate that 95.2% (n=20) of the twenty-one nursing schools in the Southern California II region used a clinical simulation<sup>3</sup> in 2009-2010. The one school that reported not using clinical simulation between 8/1/09 and 7/31/10 also reported that it plans to begin use by the end of the year. 90% of schools (n=18) that use clinical simulation centers reported that they use these facilities to provide clinical experience not available in a clinical setting; 85% (n=17) reported using it to standardize clinical experiences; three-quarters of the schools that use clinical simulation (n=15) do so in order to check clinical competencies. Data also indicate that 75% (n=15) of the twenty nursing schools that currently use a clinical simulation center have plans to expand it.

<b>Reasons for Using a Clinical Simulation Center*</b>	<b>2007-2008</b>	<b>2008-2009</b>	<b>2009-2010</b>
To standardize clinical experiences	70.0%	76.5%	85.0%
To provide clinical experience not available in a clinical setting	70.0%	82.4%	90.0%
To check clinical competencies	80.0%	58.8%	75.0%
To make up for clinical experiences	90.0%	82.4%	60.0%
To increase capacity in your nursing program	10.0%	0.0%	10.0%
Number of schools that use a clinical simulation center	10	17	20

\*These data were collected for the first time in 2006-2007. However, changes in these questions for the 2007-2008 administration of the survey and lack of confidence in the reliability of the 2006-2007 data prevent comparability of the data. Therefore, data from previous years of the survey are not shown.

### *Clinical Space & Clinical Practice Restrictions<sup>‡</sup>*

44% (n=11) of the twenty-five pre-licensure nursing programs in the Southern California II region reported being denied access to 18 clinical placement sites in 2009-2010 that had been available during the 2008-2009 academic year, affecting a total of 242 students. This was reported by only ADN and BSN programs. Neither of the region's two ELM programs reported being denied clinical space that had been previously available. Overall, the most frequently reported reasons for why ADN and BSN programs were denied clinical space were competition for space arising from an increase in the number of nursing students in the region, and being displaced by another program. However, there are differences in reasons reported by program type. 62.5% of ADN programs reported that space was unavailable because the clinical site was seeking magnet status, whereas none of the region's BSN programs reported this as a reason. In contrast, BSN programs much more frequently reported a decrease in patient census and nursing residency programs as a reason for being denied space by comparison with ADN programs.

<sup>3</sup> Clinical Simulation Center/Experience - students have a simulated real-time nursing care experience using hi-fidelity mannequins and clinical scenarios, which allow them to integrate, apply, and refine specific skills and abilities that are based on theoretical concepts and scientific knowledge. The experience includes videotaping, de-briefing and dialogue as part of the learning process.

<sup>‡</sup> Data were collected for the first time in the 2009-2010 survey.

Reasons for Clinical Space Being Unavailable	Program Type		
	ADN	BSN	Total
	%	%	%
Competition for Clinical Space due to Increase in Number of Nursing Students in Region	75.0%	66.7%	72.7%
Displaced by Another Program	87.5%	33.3%	72.7%
Staff Nurse Overload	62.5%	66.7%	63.6%
Clinical Facility Seeking Magnet Status	62.5%	0.0%	45.5%
Decrease in Patient Census	37.5%	66.7%	45.5%
Nursing Residency Programs	12.5%	66.7%	27.3%
No Longer Accepting ADN Students	25.0%	0.0%	18.2%
Other	0.0%	33.3%	0.0%
Number of programs	8	3	11

81% (n=17) of the 21 nursing schools with pre-licensure programs in the Southern California I region reported that students in their programs had encountered restrictions to clinical practice imposed on them by clinical facilities. The most common types of restricted access students faced were to bar coding medication administration, and access to electronic medical records. Schools reported that it was uncommon to have students face restrictions on direct communication with health care team members, access to an alternative setting due to liability issues, or access to IV medication administration.

Type of Restricted Access	Percentage of Schools (%)					# Schools
	Very Uncommon	Uncommon	Common	Very Common	N/A	
Bar coding medication administration	0.0%	17.7%	41.2%	35.3%	5.9%	17
Electronic Medical Records	0.0%	17.7%	47.1%	29.4%	5.9%	17
Glucometers	11.8%	29.4%	35.3%	11.8%	11.8%	17
Automated medical supply cabinets	0.0%	35.3%	41.2%	17.7%	5.9%	17
IV medication administration	23.5%	35.3%	17.7%	11.8%	11.8%	17
Clinical site due to visit from accrediting agency (Joint Commission)	11.8%	23.5%	41.2%	17.7%	5.9%	17
Direct communication with health team	29.4%	58.8%	0.0%	5.9%	5.9%	17
Alternative setting due to liability	29.4%	35.3%	11.8%	0.0%	23.5%	17

### *Faculty Census Data*

The total number of nursing faculty in the Southern California II region has more than doubled over the past decade. On October 15, 2010, there were 624 total nursing faculty in the Southern California II region, a 17.7% increase over the previous year. Of these faculty, 42.3% (n=264) were full-time and 57.7% (n=360) were part-time.

Despite an increase in the total number of faculty in the region, the need for faculty remains high. On October 15, 2010, there were 48 vacant faculty positions in the Southern California II region. These vacancies represent a 7.1% faculty vacancy rate, which remains one of the highest vacancy rate reported over the past ten years.



**Faculty Census Data<sup>1</sup>**

	Year									
	2001	2002	2003	2004	2005 <sup>2</sup>	2006*	2007*	2008	2009	2010
<b>Total Faculty</b>	<b>263</b>	<b>260</b>	<b>259</b>	<b>304</b>	<b>338</b>	<b>319</b>	<b>452</b>	<b>521</b>	<b>530</b>	<b>624</b>
Full-time	163	167	146	171	156	156	223	228	252	264
Part-time	100	93	113	133	127	163	229	293	278	360
<b>Vacancy Rate**</b>		<b>4.8%</b>	<b>2.3%</b>	<b>0.3%</b>	<b>2.0%</b>	<b>3.0%</b>	<b>3.4%</b>	<b>4.9%</b>	<b>8.6%</b>	<b>7.1%</b>
Vacancies		13	6	1	7	10	16	27	50	48

\* The sum of full- and part-time faculty did not equal the total faculty reported in these years.

\*\*Vacancy rate = number of vacancies/(total faculty + number of vacancies)

1 - Census data represent the number of faculty on October 15<sup>th</sup> of the given year.

2 - Faculty vacancies were estimated based on the vacant FTEs reported.

*Summary*

The Southern California II region has experienced significant program expansion in recent years, particularly at the BSN program level. Available admission space has more than tripled over the past decade, and has continued to increase over the past two years, as have new student enrollments. However, growth of available space has not kept pace with the region's demand as measured by qualified applications received. In 2009-2010, 65.1% of the 8,256 qualified applications received were not accepted, which represents a ten-year high.

Nursing program expansions have also led to a growing number of RN graduates in the region. Between 2000-2001 and 2009-2010, graduations more than tripled, from 738 in 2000-2001 to 2,011 in 2009-2010. In addition, nursing program retention rates have steadily improved since 2004-2005 and the 75.4% in 2009-2010 represents a ten-year high.

95% of schools in the Southern California II region with pre-licensure nursing programs reported using clinical simulation in 2009-2010. The importance of clinical simulation is underscored by data collected for the first time in the 2009-2010 survey, which show that approximately 44% of programs (n=11) were denied access to clinical placement sites that were previously available to them. In addition, 81% of schools (n=17) reported that their students had faced restrictions to specific types of clinical practice or to the clinical site itself during the 2009-2010 academic year.

Expansion in nursing education has required nursing programs to hire more faculty. As a result, the number of faculty in the Southern California II region has more than doubled over the past decade. Despite this increase, RN programs in the region continue to report a need for faculty. In 2010, 48 faculty vacancies were reported, which is almost double the number reported in 2008. Both the increasing number of faculty members and the continued need for faculty is likely due to program expansion. Continued program expansion will be a challenge for the region's programs without additional faculty.

## **APPENDIX A – Southern California II Nursing Education Programs**

### **ADN Programs**

Chaffey College  
College of the Desert  
Copper Mountain College  
Cypress College  
Everest College  
Golden West Community College  
Mount San Jacinto College  
Riverside Community College  
Saddleback College  
San Bernardino Valley College  
Santa Ana College  
Victor Valley College  
West Coast University – Inland Empire  
West Coast University – Orange County

### **BSN Programs**

California Baptist University  
Concordia University Irvine  
CSU Fullerton  
CSU San Bernardino  
Loma Linda University  
University of California Irvine  
West Coast University – Inland Empire  
West Coast University – Orange County  
Western Governors University

### **ELM Programs**

California Baptist University  
CSU Fullerton

**APPENDIX B – BRN Education Advisory Committee Members****BRN Education Advisory Committee Members****Members**

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**Organization**

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College of the Canyons  
Samuel Merritt University  
Sonoma State University  
College of the Redwoods  
Loma Linda University  
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